

Product Texts

NORYL™ HN731A resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade is US FDA and European Food Contact approved, biocompatible (ISO10993 or USP Class VI), RoHS compliant, and It is subject to SABIC's Healthcare management of change and formulation lock. NORYL HN731A resin exhibits good impact resistance, excellent hydrolytical stability, and chemical resistance. This light weight and colorable material is an excellent candidate for medical device and pharmaceutical applications such as drug-delivery inhalers.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	8	cm ³ /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
ASTM Data			
Melt Flow Index, MFI	9.2	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2300	MPa	ISO 527
Yield stress	55	MPa	ISO 527
Yield strain	5	%	ISO 527
Stress at break	50	MPa	ISO 527
Strain at break	30	%	ISO 527
Flexural modulus	2200	MPa	ISO 178
Charpy notched impact strength, +23°C	15	kJ/m ²	ISO 179/1eA
Izod notched impact strength, +23°C, 4mm	15	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	5	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2860	MPa	ASTM D 638
Tensile Strength at Yield	58	MPa	ASTM D 638
Tensile Strength at Break	49	MPa	ASTM D 638
Elongation at Yield	7.2	%	ASTM D 638
Elongation at Break	28.1	%	ASTM D 638
Flexural Modulus	2640	MPa	ASTM D 790
Rockwell Hardness	R 119	-	ASTM D 785
Izod Impact notched, 1/8 in	213	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	133	J/m	ASTM D 256
Temperature	-40	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	115	°C	ISO 75-1/-2
Vicat softening temperature, B	135	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	140	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
ASTM Data			
DTUL @ 66 psi	131	°C	ASTM D 648
DTUL @ 264 psi	117	°C	ASTM D 648
Vicat Temperature	148	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	21.6	kV/mm	ASTM D 149
Dissipation Factor, 60 Hz	0.0004	-	ASTM D 150
Dielectric Constant, 60 Hz	2.65	-	ASTM D 150

NORYL™ Resin HN731A - Americas

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

Other properties	Value	Unit	Test Standard
Water absorption	0.23	%	Sim. to ISO 62
Humidity absorption	0.06	%	Sim. to ISO 62
Density	1060	kg/m ³	ISO 1183
Density	1060	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	105 - 110	°C	-
Pre-drying - Time	3 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	280 - 310	°C	-
Mold temperature	75 - 105	°C	-
Zone 1	250 - 300	°C	-
Zone 2	260 - 305	°C	-
Zone 3	270 - 310	°C	-
Screw speed	20 - 100	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics**Processing**

Injection Molding

Certifications

Food contact, Food approval FDA 21 CFR, RoHS compliant

Chemical Resistance

General Chemical Resistance

Regional Availability

North America